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Abstract of the Disclosure

A spine fixation apparatus and method including at least one longitudinal rod mounted parallel to the axis of the spine and having a plurality of stem clamps adjustably mounted to the longitudinal rod. Each stem clamp has a stem extending outwardly therefrom with the diameter of the stem being identical to the diameter of the longitudinal rod. A plurality of C-clamps are provided and are mounted to the stems and to the longitudinal rods. A plurality of bone pins are provided and are used to preliminarily mount the spinal fixation construct to the spine to allow the surgeon to determine by X-ray the accuracy of the construct with regard to the spine. A plurality of innovative bone screws are used to simultaneously anchor the C-clamps to the bone and to the respective stem and longitudinal rod. The bone screws are configured with a smaller diameter at the distal end having threads thereon for threadedly engaging the underlying bone. The bone screw includes a threaded shoulder for threadedly engaging the C-clamp to clamp the same to the stems and the longitudinal rod. The thread pitch is identical for both threaded sections of the bone screw. A second longitudinal rod can also be used to create the spinal implant construct and be coupled to the first longitudinal rod through a plurality of cross-link plates.